

ABSTRACT OF THE DISCLOSURE

2 A method for generating a laser output signal includes the steps of: generating an
optical pump signal that is a sequence optical pulses each having a duration of about $n\tau_f$,
4 where τ_f represents a fluorescence lifetime of a laser dye and $3 \leq n \leq 25$; directing the optical
pump signal into an optical resonant cavity having a laser dye gain element that contains the
6 laser dye for transforming the optical pump signal into an excited optical signal; resonating
the excited optical signal in the optical resonant cavity; and emitting a portion of the excited
8 optical signal from the optical resonant cavity.